

Evidence of Other Leading Traders' Motives

In both public statements and interviews, most leading traders repeatedly said they bought or sold cheese on the NCE primarily because they had shortages or surpluses of cheese.⁹⁰ However, a variety of documentary evidence supports the hypothesis that leading cheese companies had a financial motive for attempting to influence NCE prices. An executive of a leading cheese marketer explicitly stated that the interest in NCE prices of companies selling strong brands conflicts with the interest of those selling primarily private label brands to retailers or to food service customers. He explained that most companies selling branded products at list prices,

...would like to see a lower cheese market. That will give [them] the best...profit opportunities. [Such opportunities occur because] they have list prices, and therefore, they like to see, you know, not the lowest...but they like to see...certain low points in the cheese market....⁹¹

On the other hand, companies like Beatrice and Schreiber that sell substantial amounts of private label brand processed cheese or cheese food to retailers and food service customers have an interest in higher NCE prices. As explained above, if companies formula-price their selling price for processed cheese and cheese food products off the NCE, their price-cost margins rise

⁹⁰ Some buyer-traders have said they buy primarily on the NCE because they need cheese and that NCE prices are lower than the spot market. While this may explain some of the buying activity of Beatrice, Mid-Am and Schreiber, it does not explain why these buyer-traders bid up prices repeatedly in a rising market, sometimes for weeks, without getting any cheese on the NCE. The only rationale for such bidding is to raise prices, either to raise their cheese margins or as a signal that the traders believe higher prices are needed to assure an adequate supply of bulk cheese.

⁹¹ Borden, Inc., Han Kim, Vice President-General Manager Refrigerated Products, typed transcript of recorded interview, August 31, 1993, pp. 68-69.

with increases in NCE prices, other things remaining the same.⁹² The executive of a leading company stated that because of their conflicting interests, "Beatrice and Schreiber will be at one side of the camp, whereas Kraft will be at the other side of the camp as to how they perceive the prices."⁹³

One trader identified Kraft and Beatrice as market leaders, saying he deferred to their judgment. As he put it,

[E]arlier this year Beatrice was bidding--we didn't feel that the market would be going up, but...we don't have the clout or the backing of a big inventory to offer a counter opinion. We just kinda sit there and scratch our heads and say, you know, we don't understand why the market's going up. And we can only assume that Kraft and the other people who do have these big inventories,...share the same opinion as Beatrice.⁹⁴

One cooperative executive acknowledged that agricultural cooperatives have an inherent interest in higher NCE prices:

AMPI and Mid-Am,...if [they] have any bias, it would be toward wanting higher prices. [They] certainly want higher prices, but [they] must accomplish that within the constraints of the marketplace....⁹⁵

In 1988, the CEO of Mid-America, Gary Hanman, stated explicitly in a memorandum to Mid-Am members that the cooperative had successfully taken three steps to increase milk prices of farmer members.

⁹² See text at notes 40 and 41 this chapter.

⁹³ [[Source deleted from public report as not essential.]]

⁹⁴ [[Source deleted from public report as not essential.]]

⁹⁵ Interview of Mark Firth, North Central Regional Manager, AMPI, typed transcript of recorded interview, July 29, 1993, p. 39.

With your help, we've convinced Congress to increase price supports, we've increased over order premiums; and *we've raised the Green Bay Cheese Market.*⁹⁶

He elaborated on the last point as follows:

...Mid-America Farms...bid the Green Bay 40-lb. block cheese market up 4¢ per pound. Mid-America Farms needed some cheese--and went to the market to buy. On Friday, July 29, we moved the market up 2.5¢ per pound and bought two carloads of cheese (80,000 lbs.). The following Friday, on August 5, we again bid for 40 lb. blocks of cheese--moved the market up another 1.5¢--and never bought a pound of cheese. These two cheese market movements will be the equivalent of 40 cents per cwt. in your future milk checks.⁹⁷

According to a press report, Mr. Hanman again referred to Mid-Am's activity on the NCE at subsequent Mid-Am informational meetings:

According to Mr. Hanman, the way to get a better price for all farmers is to boost the Minnesota-Wisconsin price series. He said Mid-America had started to bid at the Green Bay Cheese Exchange and has been able to help boost that price although it had to purchase very little cheese on the open market because of the tight supply.

"We had decided to get into the market. The only way to move the Minnesota-Wisconsin price is to try to buy cheese on that market," he said.⁹⁸

Mid-Am's action caused NCE president Richard J. Gould to call a special meeting of the Board of Directors of the NCE.⁹⁹ Because Mid-Am's action had allegedly damaged the

⁹⁶ Mid-Am Member Memos, Vol. 15, August 1988, p. 1. (Emphasis added.)

⁹⁷ Mid-Am Member Memos, Vol. XVI, August 1988, pp. 1,2.

⁹⁸ *The Country Today*, September 7, 1988, p. A8. Although the date on which Mr. Hanman made the above statement was not given by this source, *Agri-View*, September 9, 1988, Section 2, reported that Hanman had made a similar remark at a September 1, 1988, meeting at Eau Claire and at other meetings in Mid-Am's territory. Hanman reportedly said that co-op managers were "disturbed that the M-W didn't move in June...the way to move the M-W was to buy at Green Bay." Joel McNair, "Mid-America Temporarily Off Exchange," *Agri-View*, Section B, September 15, 1988.

⁹⁹ The minutes of that meeting state, in part:

A special meeting of the Board of Directors of the National Cheese Exchange was held on September 2, 1988, ...to consider action against Mid-America Dairymen, Inc...in communicating to its members that through its activities at the Trading

"integrity of the Exchange and the validity of its transactions," the Board adopted the motion of Exchange president Richard J. Gould that Mid-Am be "suspended from the privilege of trading on the Exchange for a period of two months," the maximum permissible suspension.

In a letter to Mid-Am's general counsel explaining the NCE's action, President Gould said:

First of all, you should understand that the Board of Directors of the Exchange does not believe any action of Mid-America Dairymen, Inc., manipulated the Cheese Market on July 29, 1988, or August 5, 1988. *It is generally known that the recent price increases have been a result of general market condition and that no one individual member can manipulate prices on the National Cheese Exchange, Inc. Prices move as a result of interactions between buyers and sellers and general market conditions (emphasis added).*¹⁰⁰

Sessions of July 29, 1988, and August 5, 1988, it had increased the price of cheese and thereby the price paid its members for milk... While the Board was satisfied that Mid-America Dairymen, Inc. had not by its bidding on the two dates mentioned increased the price of cheese, the letter represented and boasted to its recipients that the price of cheese had been *unilaterally manipulated* through the bidding activities of Mid-Am for the benefit of its members.

The assertion that Mid-Am manipulated the upward movement of cheese prices was obviously damaging to the reputation of the Exchange in that it implied that its members can use the facilities of the Exchange for illegal price fixing purposes. The letter was felt particularly detrimental to the Exchange in view of the fact that the Exchange and its members had within the past year been publicly accused by members of the Wisconsin Legislature of illegal price fixing and had been the subject of an investigation by the State of Wisconsin Attorney General. Minutes of the Directors, National Cheese Exchange, September 2, 1988. (Emphasis added.)

¹⁰⁰ R.J. Gould, President of NCE, to Wayne H. Hoecker, Gage & Tucker, "Re: Mid-America, Inc., September 6, 1988." Mid-Am counsel had previously written R.J. Gould that "Mid-America Dairymen vigorously denies that its actions on the Exchange on July 29 and August 5 constituted any sort of market manipulation. These actions were taken for the legitimate purpose of buying cheese to fill market demand." Wayne H. Hoecker to Richard J. Gould, September 2, 1988.

At a special NCE Board of Directors meeting September 23, 1988, Dr. Lonnie Spurgeon of Mid-Am was given an opportunity to explain Mr. Hanman's memo dated August 1988.¹⁰¹ Following a discussion of the matter, no motion was made to lift the suspension.¹⁰²

One significant aspect of the Mid-Am affair is that the Board of Directors seemed preoccupied with protecting the integrity and reputation of the Exchange as a highly competitive market rather than with considering seriously whether Mid-Am's action may have raised prices or may have been taken in concert with others. The Board summarily dismissed the possibility that market manipulation had occurred, because, as Mr. Gould asserted, "It is generally known that...no one individual can manipulate prices on the National Cheese Exchange, Inc. Prices move as a result of interaction between buyers and sellers and general market conditions."¹⁰³

The Board's deliberation and action focused solely on Mid-Am's NCE bidding in blocks only on July 9 and August 5, the days mentioned in the Mid-Am memorandum, even though

¹⁰¹ The Board minutes report that

Mr. Spurgeon...stated, among other things, that he considered that the words used by Mr. Hanman in the memo were not the best but that this was Mr. Hanman's way of "completely communicating" with Mid-America's members. Mr. Spurgeon apologized for the words that were used and admitted that the memo cast the Exchange in a bad light, regretted that Mr. Hanman had used the words that he did use in the memo and acknowledged that the activities of Mid-America could not have resulted in an increase in cheese prices. Mr. Spurgeon concluded by asking the Directors to consider lifting the suspension. Minutes of the Board of Directors, National Cheese Exchange, September 23, 1988.

¹⁰² *Id.* In another action, the Board amended Section 4 (a) of Article III of the Exchange Bylaws to read, in part, that a member can be suspended from trading "for any conduct considered detrimental to the interests or welfare of the Corporation. Suspension in each case shall be for such period of time as may be designated by the Board of Directors not exceeding six months." This action increased the permissible period of suspension from two months to six months. *Id.*

¹⁰³ R.J. Gould, President of NCE, to Wayne H. Hoecker, General Counsel, Mid-America Dairymen, Inc., September 6, 1988.

Mid-Am also led bidding for blocks in the following two weeks, when block prices rose 2.75 cents per pound and 4.75 cents per pound, respectively. On neither day were Mid-Am's nor any other traders' bids filled.

While analyzing the situation, it is useful to place Mid-Am's activity in a broader context, as well as Mr. Hanman's comments regarding this activity. In prior years Mid-Am had made very few purchases on the NCE. In fact, it had bought no loads in 1987, the first full year Kraft was exclusively a seller-trader on the Exchange, accounting for 70 percent of barrel sales and 47 percent of total sales.¹⁰⁴ In a September 1987 memo to members, Mid-Am CEO Hanman accused Kraft's large sales on the NCE of both holding down the cheese market and manipulating the price of cheese.¹⁰⁵ NCE president Gould, in commenting on that episode in 1988, wrote, in part:

It was obvious then and it is obvious now that Gary [Hanman] does not understand the function of the Exchange and does not seem to care about learning.¹⁰⁶

Perhaps Mr. Hanman had inferred that since Mr. Gould apparently believed Kraft's extensive *selling* activity on the NCE posed no threat of market manipulation, neither would he consider Mid-Am's *buying* to be problematic. If the activities themselves were not against regulations, then Mr. Hanman violated NCE rules only because he told his members why he was buying. In 1988, Mid-Am bought only six loads on the NCE (1.7 percent of total purchases on the NCE), whereas Kraft made 77 percent of all sales on the NCE in that year.

¹⁰⁴ Table 4.1 and Appendix Table 4.1a.

¹⁰⁵ National Cheese Exchange, "Mid-America Farms Suspension," September 6, 1988. This is a file memorandum written by Mr. Gould.

¹⁰⁶ *Id.*, p. 2.

Following its two month suspension, Mid-Am virtually ceased trading on the NCE for over one year. It bought only three loads in the last two months of 1988 and sold three loads in 1989. Mid-Am resumed buying on a modest scale (48 loads) in 1990. It then became the largest buyer on the NCE in 1991 and was second only to Beatrice in 1992 and 1993 (Table 4.2). The NCE president and Board apparently have not objected to this activity.

Mr Gould was correct when he concluded that Mid-Am had not *unilaterally* increased NCE prices in July and August 1988. Although Mid-Am led the bidding on each of four weeks in July and August, it was joined by other buyers, particularly Beatrice. Indeed, Mr. Hanman told his members that Mid-Am had not done it "by ourselves."¹⁰⁷ Moreover, seasonal market conditions doubtless warranted some price increases in this period.

The NCE Board was correct in concluding that Mid-Am had not "unilaterally" manipulated prices. But given the thinness of trading on the NCE, one cannot infer categorically that a much larger trader could not unilaterally influence NCE prices or that two or more leading traders acting in concert, either by explicit or implicit agreement, could not manipulate the thin NCE market. As discussed in chapter 3, empirical studies of auction markets indicate that their competitive performance is significantly influenced by the number and size distribution of participants.¹⁰⁸

Another alleged attempt to manipulate the NCE occurred August 24, 1990. On that day, according to NCE activity minutes, after prices of blocks had fallen 2.5 cents on a series of

¹⁰⁷ Indeed Mid-Am's CEO, Gary Hanman, acknowledged as much when he reportedly told his members on September 1, 1988, that "Mid-Am did it. Not by ourselves, but we led the way." *Agri-View*, September 9, 1988, p. 16.

¹⁰⁸ See Chapter 3, note 37.

offers and reduced offers, Kraft (K) covered three offers of Alpine Lace (AP) at \$1.4225 (Figure 4.1). Then, on the last trade of the day, Beatrice (BF) covered an outstanding offer by Dairystate (DS) on two loads of blocks at \$1.4325, one cent above the immediate prior offer just covered by Kraft at \$1.4225.

According to NCE president Gould, Beatrice's trader on the Exchange, Jerome Folz, admitted to Gould following the trading session that the purpose of the trade was

...to establish a higher market for 40 pound block. This appeared to be a deliberate attempt of Beatrice to manipulate the market and I so advised Mr. Folz. His response was that if this was "illegal" we should change the rules.¹⁰⁹

The NCE Board of Directors held a special meeting on this matter August 31, 1990, at which Mr. Folz denied admitting that his trading on August 24, 1990, was to manipulate the market. Beatrice president Robert Burns stated that NCE rules for trading contained "gray areas" and needed improvement.¹¹⁰

The majority of the Board believed that a letter of reprimand should be prepared and sent to Beatrice advising that because such trading activity

...could be interpreted as an attempt by Beatrice to manipulate the market and...could result in severe criticism of Exchange activities...any further activity by Beatrice of a

¹⁰⁹ R.J. Gould, President, to Board of Directors, National Cheese Exchange, August 27, 1990.

¹¹⁰ Minutes of a Special Meeting of the Board of Directors of the National Cheese Exchange, August 31, 1990. Bernard Golbach of Masters Gallery stated that Richard Reski of Beatrice had asked him earlier in the week of August 24 whether NCE rules for trading covered all posted offers regardless of prices. Golbach told Reski that while there were no rules to prevent such trading it would be extremely unlikely anyone would do so because the buyer would likely be paying more than was necessary.

similar nature could result in suspension from the privilege of trading on the Exchange or expulsion therefrom.¹¹¹

Another apparent instance of trading against self-interest came to the attention of the Exchange president March 16, 1990. On March 13, 1990, Dairystate opened block bidding at \$1.25 cents a pound, 3.75 cents a pound below the closing price during the two preceding sessions. Kraft immediately filled the bid. After Kraft filled the initial bid, Mid-Am and Beatrice made successive bids. Kraft filled three of these bids until the price returned to \$1.2675 a pound, the previous week's closing price.¹¹² The customary trading practice is for opening bids or offers to be made at the previous week's close. When a trader departs from this pattern, the general practice is for another trader to bid or make an offer at the previous week's close. (For example, August 21, 1992, Alpine Lace opened barrel bidding at \$1.235, 10 cents below the previous week's close. Kraft then made an offer to sell at \$1.335, the previous week's close.)

¹¹¹ *Id.* President Gould believed that in view of Mr. Folz's admission to him that Beatrice's intent was to raise the price of block, "a more severe sanction should be imposed upon Beatrice." In his letter to Beatrice, Gould said, in part, "[Y]our company's trading activity was clearly against its economic best interests and could easily be interpreted as an intentional attempt to manipulate the market price of 40 pound block. Such trading was extremely inept, could result in severe criticism of the Exchange and deterioration of its integrity." R.J. Gould to Robert Burns, President, Beatrice Cheese, Inc., September 21, 1990. Earlier President Gould said "Beatrice's trading was not consistent with the natural self interest of buyers to attempt to purchase at the existing or a lower price." Minutes of the Board of Directors of the National Cheese Exchange, August 31, 1990, 3.

¹¹² Kraft counsel stated that this "*singular* irregular trade identified to have occurred in many years covered by Kraft production was self-policed by Kraft....That one instance, involving a mistake by an inexperienced, stand-in trader, on a single transaction, has not re-occurred." Tefft W. Smith, Kirkland & Ellis, to Reid Klopp, Assistant Counsel, Department of Agriculture, Trade and Consumer Protection, "Re: Wisconsin DATCP Investigation Regarding the National Cheese Exchange," January 19, 1995. Actually, Kraft made four trades on March 13, 1990.

Other traders complained to President Gould that it appeared Kraft was trying to lower the market since normally a seller would seek a higher price before accepting such a low bid. President Gould asked Kraft's trader, Jeff Voermans, Procurement Manager Green Bay, whether this trade had been a mistake or oversight. Voermans reported his conversation with Gould to Kraft purchasing director Wayne Hangartner, in part: "His [Gould's] interpretation is that it was an oversight." Voermans told Gould that "in retrospect we probably should have responded differently and that his interpretation that it was an oversight was correct."¹¹³ Mr. Hangartner said this matter was not brought to the attention of the Board of Directors.¹¹⁴

There is evidence suggesting that large traders have acted to increase prices either unilaterally or jointly. For example, executives of a large trader on the NCE were asked in an interview whether they agreed that had they not participated in trading on a particular day prices would have fallen without a single purchase. They replied as follows:

First Executive: "We take all the credit we can."

Second Executive: "There's no question; we support sometimes."

First Executive: "Yeah. And we've got ulterior motives for that, there's no question about it. We've got a [--] million pound inventory running around. At one time a lot higher."¹¹⁵

Traders have many opportunities to exchange market information in the normal course of business. Cheese marketers necessarily communicate on a regular basis with their committed

¹¹³ Kraft General Foods, Inc., Jeff Voermans to Wayne Hangartner, Director of Cheese Procurement and Inventories, "NCE 3/16," March 16, 1990, KGF 17104.

¹¹⁴ Typed transcript of recorded interview of Kraft personnel, December 8-9, 1992, p. 116. Hangartner said that had he been trading that day he would have responded to the Dairystate bid by making an offer at the previous session's close. *Id.*

¹¹⁵ [[Source deleted in public report as not essential.]]

suppliers, and all large companies have frequent contact in the spot market. As discussed in Chapter 6, in November 1989 one cheese marketer conducted a "poll" of nine companies with which it did business.¹¹⁶ It concluded, in part, that "The lowest block market anticipated by major companies polled is \$1.28. Most companies estimate the range will be \$1.30-\$1.32."¹¹⁷ Although traders on the NCE avoid the appearance of communicating with one another regarding prices prior to and during NCE trading sessions, ample opportunities exist for communication in the normal course of business off the Exchange.¹¹⁸

One example is discussed in an interview summary of an assistant Attorney General of Wisconsin. Mr. Joseph Peterson, the bulk procurement and bulk sales manager of Land O' Lakes explained in some detail the nature of his contacts with other cheese companies. He said he never had discussions with other companies regarding their inventory and similar information that is considered very secret within the industry.¹¹⁹

He commented as follows regarding his contacts with other cheese companies:

Mr. Peterson related that in addition to...trade association meetings he also has contacts with other cheese companies as customers and as suppliers of cheese to Land O' Lakes for purchases outside of the exchange....He added that during 1987 the majority of Land

¹¹⁶ [[Source deleted in public report as not essential.]]

¹¹⁷ The information companies supply one another may not necessarily reflect their actual views. See Chapter 6, Section A.

¹¹⁸ Parties interviewed during 1987-1988 in the course of an investigation of cheese prices by the staff of the Wisconsin Attorney General repeatedly stated that they never spoke to one another about prices before the opening of trading at the NCE. The investigators' reports of these interviews are available in the offices of the Wisconsin Department of Justice.

¹¹⁹ Interview of Joseph Peterson, Bulk Procurement and Bulk Sales Manager, Land O' Lakes, Inc., by Matt Frank, Assistant Attorney General, State of Wisconsin, January 1988, p. 3.

O' Lakes' bulk cheese sales were to Kraft. Mr. Peterson informed that these cheese transactions were negotiated either by telephone or over dinner on a Thursday night [prior to NCE Friday trading sessions] in Green Bay, Wisconsin. Mr. Peterson clarified that the majority of the negotiations were handled by telephone and that the negotiations over dinner occurred only three or four times during the last year.

Mr. Peterson informed that the price arrived at during these negotiations was tied to the market opinion of the National Cheese Exchange. He explained that these contracts to sell cheese to Kraft varied from a short term contract of two weeks to a one year contract....Mr. Peterson further related that the majority of cheese sold to Kraft by Land O' Lakes was sold outside of the National Cheese Exchange.¹²⁰

There is also evidence that a broker may influence NCE prices to achieve the objective of its customer. As discussed in Chapter 6, DairyState played the leading role in taking down the barrel market on February 2, 1990, apparently selling on the instructions of a large cheese manufacturer.¹²¹

F. Summary and Conclusions

There is considerable evidence supporting the hypothesis that during 1988-1993 most leading NCE traders often were motivated by the desire to influence prices rather than merely to buy or sell on the Exchange. The business characteristics of each firm determine whether it benefits from higher or lower NCE prices.

Firms whose raw material cheese costs are coupled directly or indirectly to NCE prices and who sell most of their finished cheese as strong consumer brands at wholesale list prices not coupled to NCE prices have a financial interest in *lower* NCE prices, other things being the

¹²⁰ *Id.*, p. 4. Other persons interviewed by Wisconsin Justice Department investigators also reported that they had many contacts with competitors in the normal course of their business, especially in negotiating supply arrangements and spot sales. For example, see Wisconsin Justice Department interview of Borden Foods, February 4, 1988, pp. 3-4.

¹²¹ See Chapter 6, Section A.

same.¹²² Kraft, Borden, and Alpine Lace are the most prominent traders in this category. Not only does Kraft have a financial interest in the level of NCE prices, but documentary evidence also implies that Kraft believed it could influence NCE prices.

Firms whose raw material cheese costs are coupled directly or indirectly to NCE prices and whose processed cheese prices are coupled directly or indirectly to NCE formula-based prices have a modest financial interest in *higher* NCE prices, other things being the same. The leading proprietary traders in this category are Beatrice and Schreiber.¹²³ However, at times these companies may also benefit financially because they can buy more cheaply on the NCE than from a committed supplier or in the spot market. However, examinations of leading buyer-trader activity on the NCE strongly suggests that often they trade without expecting their bids to be filled, sometimes bidding up the price for weeks at a time in a rising market without any bids being covered. Such activity supports the hypothesis that bidding is occurring to influence prices rather than to actually procure cheese. The motive for such trading may be either to raise prices and thereby increase such traders' cheese margins or to signal suppliers that prices need to be higher in order to insure adequate bulk cheese production.

Finally, agricultural cooperatives that seek to maximize the joint profits of their farmer members and their cooperatively owned cheese enterprises have a direct interest in higher NCE prices because this means increased milk prices to farmers. The three leading cooperative

¹²² Virtually all raw material cheese is purchased from contract or committed suppliers at NCE-based formula prices. The cost of cheese which these companies manufacture for themselves is also coupled to NCE prices because the price of the milk used in making cheese is driven by NCE prices.

¹²³ Masters Gallery Food, Inc., a similarly situated but much smaller company, apparently has the same motives as Beatrice. During 1988-1993, Masters Gallery was primarily a buyer on the NCE (Table 4.2).

traders, Mid-Am, AMPI and Land O' Lakes, are all major sellers of bulk cheddar cheese, though all sell some finished cheese products. The cooperative with the greatest *potential* interest in lower NCE prices is Land O' Lakes, since it sells a substantial volume of finished product under its own brand. However, benefits from this source may, at best, be modest since its brands are not as strong as those of the market leaders. Finally, though farmers benefit from higher NCE prices in the short run, cooperative managers cannot be indifferent to the effect higher prices may have on long-run milk output. In the absence of control over the supply of milk for manufacturing and without government support programs, the highest price cooperatives may achieve for bulk cheese is the competitive equilibrium price. They do, of course, have a strong incentive to prevent NCE prices from going below this price, which may occur if NCE prices are manipulated downward.

Undoubtedly the NCE has a substantial impact on the financial interests of cheese manufacturers and marketers. But do these companies attempt to influence the NCE in the direction consistent with their interests and, if so, have they been successful? This chapter has not examined in detail the actual trading conduct of traders and the extent, if any, to which their trading conduct is consistent with their financial interests in the level of NCE prices. These subjects are examined in the following chapters.

Appendix Table 4.1a
TRADES ON NCE BY PRIMARY TYPE OF BUSINESS, 1980 TO 1987

Type of Primary Business	---BARRELS---										Total	Carloads Bought							Total	
	Carloads Sold					Carloads Bought						1980	1981	1982	1983	1984	1985	1986		1987
Manufacturer of Cheese	172	10	22	20	106	35	77	82	524	16	12	0	0	0	0	0	0	0	39	67
Land O' Lakes	0	0	0	0	116	78	174	31	399	0	0	0	0	0	0	34	0	0	0	34
Bongards'	0	0	0	0	0	0	10	0	10	0	0	0	11	11	2	0	0	0	0	24
Mid America	0	0	0	0	4	0	0	0	4	12	3	0	0	0	0	0	0	0	0	15
Anderson Clayton	0	0	0	0	0	0	0	0	0	36	7	0	0	0	0	0	0	0	0	43
Woldt's Cheese	0	0	0	0	0	0	0	0	0	11	0	16	0	9	0	0	0	0	0	36
Clearfield	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	17
N. Dorman	172	10	22	20	226	113	261	113	937	92	22	16	11	20	36	0	0	39	236	
Sub-Total																				
Marketers of Cheese	55	6	8	4	3	0	10	298	384	16	2	0	8	183	98	104	0	0	0	411
Kraft	17	16	0	2	5	26	20	0	86	56	2	0	0	23	0	0	16	0	0	97
Borden	2	0	0	0	0	0	12	0	14	70	6	14	5	9	5	0	75	0	0	184
Schrieber	6	0	0	6	0	0	2	0	14	20	0	0	8	45	0	222	288	0	0	583
Beatrice ¹	80	22	8	12	8	26	44	298	498	162	10	14	21	260	103	326	379	0	0	1275
Sub-Total																				
Brokers	0	0	0	0	47	0	0	11	58	0	0	0	0	0	0	0	0	0	0	0
Dairystate	0	0	0	0	47	0	0	11	58	0	0	0	0	0	0	0	0	0	0	0
Sub-Total																				
All Others²	5	0	0	0	1	0	21	2	29	3	0	0	0	2	0	0	0	6	11	
Total	257	32	30	32	282	139	326	424	1522	257	32	30	32	282	139	326	424	1522		

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1980-87.

¹Includes trades of Pauly Cheese which was acquired by Beatrice Cheese, Inc., in 1984.

²Includes those companies that made less than 1% of all carloads traded on NCE during this period. These are Marketing Association (sold 10 carloads), Twin Dakota (sold 5 carloads), Edelweiss (sold 1 carload), Swiss Valley (sold 8 carloads), Masters Gallery (sold 5 and bought 2 carloads), Northern (bought 7 carloads), and AMPI (bought 2 carloads).

Appendix Table 4.1b

TRADES ON NCE BY PRIMARY TYPE OF BUSINESS, 1980 TO 1987

Type of Primary Business	---BLOCKS---										Total	Carloads Bought							Total
	Carloads Sold																		
	1980	1981	1982	1983	1984	1985	1986	1987	Total	1980	1981	1982	1983	1984	1985	1986	1987		
Manufacturers of Cheese																			
Mid America	0	0	0	0	0	0	119	45	164	0	0	0	0	2	3	1	0	6	
Land O' Lakes	0	6	0	0	0	0	38	90	134	0	0	0	1	0	0	0	0	1	
Bongards'	0	0	0	0	20	0	46	8	74	0	0	0	0	0	0	0	0	0	
Twin Dakota	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
Edelweiss	0	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	
Sub-Total	2	6	0	0	20	0	203	155	386	0	0	0	1	2	3	1	0	7	
Marketers of Cheese																			
Kraft	0	0	0	0	2	3	84	34	123	0	0	0	0	0	0	0	0	0	
Masters Gallery	0	0	0	1	2	1	29	16	49	0	0	0	0	0	0	12	0	12	
Marathon	0	1	10	1	0	0	0	0	12	0	0	0	0	0	0	0	31	31	
Schrieber	0	0	0	0	0	0	5	0	5	2	0	0	1	12	0	0	0	15	
Beatrice ¹	5	0	0	0	0	0	0	0	5	0	0	0	0	11	2	413	252	678	
Borden	0	0	0	0	0	0	0	0	0	5	7	10	0	0	0	0	0	22	
Sub-Total	5	1	10	2	4	4	118	50	194	7	7	10	1	23	2	425	283	758	
Brokers																			
Dairystate	0	0	0	0	0	0	102	73	175	0	0	0	0	0	0	0	0	0	
Sub-Total	0	0	0	0	0	0	102	73	175	0	0	0	0	0	0	0	0	0	0
All Others²	0	0	0	0	1	1	3	5	10	0	0	0	0	0	0	0	0	0	0
Total	7	7	10	2	25	5	426	283	765	7	7	10	2	25	5	426	283	765	765

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1980-87.

¹Includes trades of Pauly Cheese which was acquired by Beatrice Cheese, Inc., in 1984.

²Includes those companies that made less than 1% of all carloads traded on NCE during the period. These are Marketing Association (sold 7 carloads) Northern Produce (sold 2 carloads) and Swiss Valley (sold 1 carload).

Appendix Table 4.2a

TRADES ON NCE BY PRIMARY TYPE OF BUSINESS, 1988 TO 1993

---BARRELS---

Type of Primary Business	Carloads Sold						Carloads Bought							
	1988	1989	1990	1991	1992	1993	Total	1988	1989	1990	1991	1992	1993	Total
Manufacturer of Cheese														
Land O' Lakes	39	0	0	10	10	2	61	57	9	18	0	4	98	186
AMPI	0	0	0	0	0	0	0	30	56	2	15	17	12	132
Mid America	0	0	0	0	0	0	0	4	0	2	78	29	18	131
Bongards'	32	0	0	0	32	7	71	0	0	0	0	0	0	0
Edelweiss Cheese	0	0	0	0	0	0	0	19	0	0	0	0	0	19
Sub-Total	71	0	0	10	42	9	132	110	65	22	93	50	128	468
Marketers of Cheese														
Kraft	277	107	131	260	138	336	1249	0	0	0	0	0	0	0
Borden	2	0	3	18	19	17	59	28	0	0	4	0	0	32
Alpine Lace	0	0	0	0	10	4	14	0	0	0	0	0	1	1
Beatrice	0	0	0	0	0	0	0	109	10	64	59	117	211	570
Schrieber	0	0	0	0	0	0	0	78	28	12	118	34	46	316
Masters Gallery	0	0	0	0	0	0	0	0	0	36	1	0	0	37
Sub-Total	279	107	134	278	167	357	1322	215	38	112	182	151	258	956
Brokers														
Dairystate	0	0	10	0	0	30	40	8	0	0	6	0	10	24
Northern Wis.	0	0	0	0	0	0	0	6	4	8	7	6	0	31
Sub-Total	0	0	10	0	0	30	40	14	4	8	13	6	10	55
All Others¹	0	0	0	0	0	5	5	11	0	2	0	2	5	20
Total	350	107	144	288	209	401	1499	350	107	144	288	209	401	1499

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-1993.

¹Includes those companies that made less than 1% of all carloads traded on NCE during this period. These are Schurman (sold 5 and bought 5 carloads), Hemke Cheese (bought 13 carloads) and Northwood (bought 2 carloads).

Appendix Table 4.2b
TRADES ON NCE BY PRIMARY TYPE OF BUSINESS, 1988 TO 1993

Type of Primary Business	---BLOCKS---										Total			
	Carloads Sold					Carloads Bought								
	1988	1989	1990	1991	1992	1993	Total	1988	1989	1990	1991	1992	1993	Total
Manufacturer of Cheese														
Mid America	1	3	0	0	0	0	4	2	3	46	59	103	147	360
AMPI	0	0	0	0	0	0	0	0	0	5	5	12	18	40
Land O' Lakes	7	2	0	0	2	0	11	0	0	3	0	0	0	3
Dairy Gold	0	0	0	5	9	0	14	0	0	0	0	0	0	0
Golden Cheese	0	0	0	0	10	0	10	0	0	0	0	0	0	0
Sub-Total	8	5	0	5	21	0	39	2	3	54	64	118	165	403
Marketers of Cheese														
Kraft	0	0	62	79	120	107	368	0	0	22	0	0	0	22
Alpine Lace	0	0	62	16	20	18	116	0	0	0	0	0	2	2
Beatrice	0	0	0	0	0	0	0	9	3	108	26	48	9	203
Marathon	0	0	35	0	0	0	35	0	0	0	0	0	0	0
Masters Gallery	0	5	2	0	0	0	7	0	0	10	15	0	0	25
Schrieber	0	0	6	0	0	1	7	0	0	1	5	0	0	6
Sub-Total	0	5	167	95	140	126	533	9	3	141	46	48	11	258
Brokers														
Dairystate	3	1	21	3	0	61	89	0	0	1	1	0	3	5
Northern	0	0	8	2	8	0	18	0	0	2	0	0	0	2
Schurman	0	0	0	0	0	2	2	0	0	0	0	2	13	15
Northwood	0	0	2	0	0	4	6	0	0	0	0	3	0	3
Sub-Total	3	1	31	5	8	67	115	0	0	3	1	5	16	25
All Others¹	0	0	0	6	2	2	10	0	5	0	0	3	3	11
Total	11	11	198	111	171	195	697	11	11	198	111	171	195	697

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-93.

¹Include those companies that made less than 1% of all carloads traded on NCE during this period. These are Alto (bought 6 carloads), Bongards' (sold 4 carloads), Empire Cheese (bought 5 carloads), and Marketing Association (sold 6 carloads).

Appendix Table 4.3
Gains or Losses Incurred by Kraft for Raw Material Cheese Sales
NCE, Outside Sales, and Government, 1987 - 1992

	National Cheese Exchange				Outside Sales				Government Sales			
	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound
Blocks												
Barrels												
Squares												
TOTAL												
1987												
Blocks												
Barrels												
Squares												
TOTAL												
1988												
Blocks												
Barrels												
Squares												
TOTAL												
1989												
Blocks												
Barrels												
Squares												
TOTAL												
1990												
Blocks												
Barrels												
Squares												
TOTAL												

THIS INFORMATION HAS BEEN REDACTED FROM THE REPORT AT THIS TIME PURSUANT TO AN AGREEMENT WITH KRAFT GENERAL FOODS, INC., THAT THERE WILL BE A SUBSEQUENT JUDICIAL RESOLUTION OF A GOOD-FAITH DISPUTE OVER THE TRADE SECRET STATUS OF THE INFORMATION.

Appendix Table 4.3 (cont.)

National Cheese Exchange

Government Sales

Outside Sales

	National Cheese Exchange				Government Sales				Outside Sales			
	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound	No. Loads	Pounds	Gain/Loss in Dollars	Gain/Loss Cents Per Pound
Blocks												
Barrels												
Squares												
TOTAL												
1991												
Blocks												
Barrels												
Squares												
TOTAL												
1992												
Blocks												
Barrels												
Squares												
TOTAL												
Total: 1987 - 1992												

Source: Kraft General Foods, Inc. "Raw Material Cheese Sales, 1987-1992"; KGF 23755, 23757, 23759, 23763, 23765, 23766.
 *The number of outside sales of barrels in 1991 was increased by 50 to correct an error in the original source for September 1991.

Appendix Table 4.4
NCE Opinion Prices, Average Wisconsin Assembly Point (WAP) Prices
and Premiums, Weekly, 1986-1993

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/ Price 1/	Average WAP Block Price 1 Price 1	WAP Barrel Premium 2/ Premium 2/	WAP Block Premium 2/ Premium 2/
----cents per pound----							
860103	117.75	121.75	860109	118.75	123.75	1.00	2.00
860110	117.75	121.75	860116	118.75	123.75	1.00	2.00
860117	117.75	121.75	860123	118.75	123.38	1.00	1.63
860124	118.25	122.25	860130	119.00	124.00	0.75	1.75
860131	118.25	122.25	860206	118.75	124.00	0.50	1.75
860207	118.25	123.25	860213	118.75	124.50	0.50	1.25
860214	118.25	123.50	860220	118.75	125.00	0.50	1.50
860221	118.25	123.50	860227	118.75	124.50	0.50	1.00
860228	118.25	123.50	860306	116.75	122.00	-1.50	-1.50
860307	118.25	123.50	860313	118.00	123.50	-0.25	-0.00
860314	118.25	123.50	860320	118.00	123.00	-0.25	-0.50
860321	118.50	123.50	860326	118.88	124.00	0.38	0.50
860327	118.50	123.50	860403	118.88	124.50	0.38	1.00
860404	118.50	123.50	860410	118.88	124.50	0.38	1.00
860411	118.50	123.50	860417	118.63	124.50	0.13	1.00
860418	118.50	124.50	860424	118.63	125.50	0.13	1.00
860425	118.50	124.50	860501	118.63	126.25	0.13	1.75
860502	118.25	124.25	860508	118.50	126.13	0.25	1.88
860509	117.25	124.25	860515	118.00	126.00	0.75	1.75
860516	117.25	124.25	860522	118.00	126.00	0.75	1.75
860523	117.25	124.25	860529	118.00	125.50	0.75	1.25
860530	118.50	123.75	860605	118.63	124.50	0.13	0.75
860606	118.50	124.50	860612	119.13	126.00	0.63	1.50
860613	118.50	124.50	860619	119.13	125.75	0.63	1.25
860620	118.50	124.00	860626	119.13	125.25	0.63	1.25
860627	118.50	124.00	860702	119.13	125.25	0.63	1.25
860703	118.50	124.00	860710	119.13	126.00	0.63	2.00
860711	119.25	125.00	860717	119.50	126.50	0.25	1.50
860718	119.25	125.25	860724	119.00	127.25	-0.25	2.00
860725	121.00	127.00	860800	121.00	128.00	0.00	1.00
860801	122.25	127.25	860807	122.00	128.13	-0.25	0.88
860808	123.25	128.50	860814	122.50	129.25	-0.75	0.75
860815	123.25	129.00	860821	122.50	129.50	-0.75	0.50
860822	124.50	128.50	860828	124.25	131.50	-0.25	3.00
860829	123.50	127.50	860904	123.25	130.50	-0.25	3.00
860905	121.50	125.50	860911	121.50	128.50	0.00	3.00
860912	123.50	126.50	860918	122.63	129.50	-0.88	3.00
860919	124.00	127.50	860925	122.88	130.00	-1.13	2.50

NCE	NCE	NCE	Average	Average	WAP	WAP	
Date	Barrel	Block	WAP	WAP	Barrel	Block	
Date	Price	Price	Date	Price 1/	Price 1	Premium 2/	Premium 2/
----cents per pound----							
860926	124.00	128.25	861002	122.88	131.00	-1.13	2.75
861003	124.00	128.25	861009	122.88	128.75	-1.13	0.50
861010	123.75	128.25	861016	122.75	128.87	-1.00	0.62
861017	123.75	128.25	861023	122.75	128.87	-1.00	0.62
861024	123.75	130.50	861030	122.75	133.75	-1.00	3.25
861031	123.75	130.50	861106	122.75	133.75	-1.00	3.25
861107	123.75	130.50	861113	122.75	133.50	-1.00	3.00
861114	123.75	130.50	861120	122.75	133.50	-1.00	3.00
861121	123.75	130.50	861127	122.75	132.50	-1.00	2.00
861128	123.75	130.50	861204	122.75	132.50	-1.00	2.00
861205	122.17	130.50	861211	122.00	129.75	-0.17	-0.75
861212	121.75	130.50	861218	121.50	129.75	-0.25	-0.75
861219	121.50	130.50	861225	121.38	129.75	-0.13	-0.75
861226	120.75	130.25	870101	120.00	129.63	-0.75	-0.63
870102	120.00	130.00	870108	119.38	129.00	-0.62	-1.00
870109	119.00	130.00	870115	118.88	129.00	-0.13	-1.00
870116	119.00	128.25	870122	118.25	126.88	-0.75	-1.38
870123	119.00	128.00	870129	118.25	126.75	-0.75	-1.25
870130	117.50	122.50	870205	117.38	124.00	-0.13	1.50
870206	116.75	120.50	870212	117.50	122.00	0.75	1.50
870213	116.75	120.50	870219	117.25	122.00	0.50	1.50
870220	116.75	120.50	870226	117.00	122.00	0.25	1.50
870227	116.75	120.50	870305	117.00	122.25	0.25	1.75
870306	116.75	120.50	870312	117.25	122.25	0.50	1.75
870313	116.75	120.50	870319	117.25	122.25	0.50	1.75
870320	116.75	120.50	870326	117.25	122.25	0.50	1.75
870327	116.75	120.50	870402	117.25	122.25	0.50	1.75
870403	116.75	120.50	870409	117.25	122.00	0.50	1.50
870410	116.75	122.25	870415	117.25	123.75	0.50	1.50
870416	116.75	120.50	870423	117.25	122.00	0.50	1.50
870424	116.75	120.50	870500	117.00	122.00	0.25	1.50
870501	116.75	120.50	870507	117.00	122.00	0.25	1.50
870508	116.75	120.50	870514	117.00	122.00	0.25	1.50
870515	116.75	120.50	870521	117.00	122.00	0.25	1.50
870522	116.75	120.50	870528	116.50	122.00	-0.25	1.50
870529	116.75	120.50	870604	115.50	122.00	-1.25	1.50
870605	116.75	120.50	870611	116.00	122.00	-0.75	1.50
870612	116.75	120.50	870618	116.75	122.00	0.00	1.50
870619	116.75	120.50	870625	117.50	122.00	0.75	1.50
870626	116.75	120.50	870701	117.50	122.00	0.75	1.50
870702	116.75	120.50	870708	117.50	122.50	0.75	2.00
870709	116.75	120.75	870716	117.50	122.75	0.75	2.00
870717	117.50	120.75	870723	118.25	123.75	0.75	3.00

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
870724	117.75	121.50	870730	118.50	124.50	0.75	3.00
870731	117.75	121.50	870806	118.50	124.50	0.75	3.00
870807	118.00	122.50	870813	118.75	125.50	0.75	3.00
870814	118.25	122.50	870820	119.00	125.50	0.75	3.00
870821	118.25	122.50	870827	119.13	126.25	0.88	3.75
870828	119.00	124.00	870903	119.75	127.00	0.75	3.00
870904	118.25	124.00	870910	119.00	127.00	0.75	3.00
870911	118.25	124.00	870917	118.50	127.00	0.25	3.00
870918	117.00	124.00	870924	117.63	126.50	0.63	2.50
870925	117.00	122.00	871001	117.63	125.00	0.63	3.00
871002	115.00	119.00	871008	116.63	122.00	1.63	3.00
871009	115.00	119.00	871015	116.63	122.00	1.63	3.00
871016	115.00	119.00	871022	115.00	121.00	0.00	2.00
871023	115.00	119.00	871029	115.25	121.50	0.25	2.50
871030	115.00	119.00	871105	115.25	121.50	0.25	2.50
871106	115.00	119.00	871112	115.50	122.00	0.50	3.00
871113	115.00	119.00	871119	115.50	121.00	0.50	2.00
871120	115.00	119.00	871124	115.38	121.00	0.38	2.00
871125	115.00	119.00	871203	115.38	120.75	0.38	1.75
871204	110.00	119.00	871210	112.88	120.75	2.88	1.75
871211	110.00	119.00	871217	112.88	120.75	2.88	1.75
871218	110.00	119.00	871222	112.88	120.75	2.88	1.75
871223	110.00	119.00	871229	112.38	120.75	2.37	1.75
871230	110.00	119.00	880107	112.88	120.00	2.88	1.00
880108	110.00	119.00	880114	112.88	119.13	2.88	0.13
880115	110.00	119.00	880121	110.13	117.13	0.12	-1.87
880122	110.00	119.00	880128	110.63	117.13	0.63	-1.87
880129	109.25	115.00	880204	109.75	116.75	0.50	1.75
880205	109.25	115.00	880211	109.75	115.50	0.50	0.50
880212	109.25	114.00	880218	109.75	116.75	0.50	2.75
880219	109.25	114.00	880225	109.75	115.50	0.50	1.50
880226	109.25	114.00	880303	109.75	115.50	0.50	1.50
880304	109.25	114.00	880310	109.75	115.50	0.50	1.50
880311	109.25	114.00	880317	110.00	115.75	0.75	1.75
880318	109.25	114.00	880324	109.75	115.75	0.50	1.75
880325	109.25	114.00	880330	109.75	115.50	0.50	1.50
880331	109.00	114.00	880407	109.75	115.25	0.75	1.25
880408	109.00	114.00	880414	109.63	115.25	0.62	1.25
880415	109.00	114.00	880421	109.63	115.25	0.62	1.25
880422	109.00	114.00	880428	109.63	114.75	0.62	0.75
880429	109.00	114.00	880505	109.63	114.75	0.62	0.75
880506	109.00	114.00	880512	109.87	114.75	0.87	0.75
880513	109.00	114.00	880519	110.13	114.75	1.12	0.75

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP, Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
880520	109.00	114.00	880526	110.13	114.75	1.12	0.75
880527	109.50	114.00	880602	110.38	115.50	0.88	1.50
880603	109.50	114.00	880609	110.38	115.50	0.88	1.50
880610	109.50	114.00	880616	110.50	115.50	1.00	1.50
880617	110.00	114.00	880623	111.00	116.38	1.00	2.38
880624	113.00	116.75	880700	114.00	118.00	1.00	1.25
880701	114.00	116.75	880707	115.13	118.00	1.13	1.25
880708	115.50	116.75	880714	116.38	118.00	0.88	1.25
880715	115.75	116.75	880721	116.75	118.25	1.00	1.50
880722	116.00	116.75	880728	116.88	119.00	0.88	2.25
880729	116.00	119.25	880804	117.38	122.75	1.38	3.50
880805	116.25	120.75	880811	117.75	125.00	1.50	4.25
880812	119.50	123.50	880818	121.00	128.00	1.50	4.50
880819	124.25	127.25	880825	125.75	131.50	1.50	4.25
880826	125.75	128.75	880901	127.25	133.00	1.50	4.25
880902	126.25	129.00	880908	128.25	133.25	2.00	4.25
880909	126.75	130.00	880915	130.00	134.25	3.25	4.25
880916	127.75	130.75	880922	130.25	135.50	2.50	4.75
880923	127.75	130.75	880929	130.75	135.75	3.00	5.00
880930	128.00	130.75	881006	131.00	135.50	3.00	4.75
881007	128.00	131.75	881013	131.00	136.50	3.00	4.75
881014	128.00	131.75	881020	131.25	136.63	3.25	4.88
881021	128.00	131.75	881027	130.50	136.75	2.50	5.00
881028	128.00	131.75	881103	130.50	136.75	2.50	5.00
881104	128.75	131.75	881110	131.25	136.25	2.50	4.50
881111	128.75	131.75	881117	130.75	136.00	2.00	4.25
881118	128.75	132.25	881122	130.75	136.50	2.00	4.25
881123	128.50	132.25	881201	130.25	136.25	1.75	4.00
881202	127.75	132.25	881208	129.50	136.25	1.75	4.00
881209	127.75	132.25	881215	128.75	136.00	1.00	3.75
881216	127.50	132.25	881222	128.50	135.75	1.00	3.50
881223	127.25	132.25	881229	128.25	135.75	1.00	3.50
881230	126.25	132.25	890105	127.25	134.75	1.00	2.50
890106	125.25	132.25	890112	125.75	134.75	0.50	2.50
890113	124.50	127.75	890119	125.38	129.25	0.88	1.50
890120	122.00	123.50	890126	122.62	121.00	0.62	-2.50
890127	117.75	117.75	890202	116.75	117.50	-1.00	-0.25
890203	115.25	117.75	890209	115.88	117.50	0.62	-0.25
890210	115.25	117.75	890216	115.50	118.00	0.25	0.25
890217	113.00	117.75	890223	113.75	117.25	0.75	-0.50
890224	112.00	117.75	890302	112.63	117.50	0.63	-0.25
890303	112.00	117.75	890309	112.88	117.50	0.88	-0.25
890310	112.00	117.75	890315	113.13	118.00	1.13	0.25

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
890316	112.00	117.75	890322	113.13	118.00	1.13	0.25
890323	112.50	118.00	890330	113.63	118.12	1.13	0.12
890331	114.00	118.75	890406	115.00	119.00	1.00	0.25
890407	114.00	118.75	890413	115.13	119.00	1.13	0.25
890414	114.50	118.75	890420	115.75	121.75	1.25	3.00
890421	116.50	118.75	890427	117.38	121.75	0.88	3.00
890428	117.00	118.75	890504	118.25	121.75	1.25	3.00
890505	117.75	119.00	890511	118.75	121.88	1.00	2.88
890512	119.00	122.25	890518	120.25	123.50	1.25	1.25
890519	121.50	123.25	890525	122.50	126.75	1.00	3.50
890526	122.25	124.75	890601	123.25	128.50	1.00	3.75
890602	122.25	124.75	890608	123.50	128.75	1.25	4.00
890609	122.50	125.50	890615	122.50	129.50	0.00	4.00
890616	123.50	127.50	890622	124.75	131.50	1.25	4.00
890623	125.75	130.25	890629	127.25	134.50	1.50	4.25
890630	131.00	135.25	890706	132.75	139.50	1.75	4.25
890707	131.00	135.25	890713	134.25	139.50	3.25	4.25
890714	131.00	135.25	890720	134.88	139.75	3.88	4.50
890721	134.25	138.50	890727	137.63	143.00	3.38	4.50
890728	134.25	138.50	890803	138.63	143.13	4.38	4.63
890804	135.75	140.00	890810	140.13	145.75	4.38	5.75
890811	139.25	143.50	890817	144.13	149.25	4.88	5.75
890818	139.25	143.50	890824	145.75	149.25	6.50	5.75
890825	141.75	146.00	890900	148.75	151.75	7.00	5.75
890901	141.75	146.00	890907	148.75	152.00	7.00	6.00
890908	142.75	147.00	890914	149.75	155.00	7.00	8.00
890915	143.75	148.00	890921	150.75	156.50	7.00	8.50
890922	147.00	151.25	890928	154.00	159.75	7.00	8.50
890929	147.00	151.25	891005	154.50	159.75	7.50	8.50
891006	147.00	151.25	891012	154.50	159.75	7.50	8.50
891013	147.00	151.25	891019	155.00	159.75	8.00	8.50
891020	147.00	151.25	891026	157.00	161.25	10.00	10.00
891027	147.25	151.25	891102	157.25	161.75	10.00	10.50
891103	150.50	154.50	891109	160.00	164.50	9.50	10.00
891110	150.50	154.50	891116	160.00	164.00	9.50	9.50
891117	150.50	154.50	891121	160.00	164.00	9.50	9.50
891122	150.50	154.50	891200	158.25	163.00	7.75	8.50
891201	150.50	154.50	891207	158.25	163.00	7.75	8.50
891208	150.50	154.50	891214	157.75	162.50	7.25	8.00
891215	150.50	154.50	891221	156.00	161.50	5.50	7.00
891222	150.50	154.50	891228	156.00	161.50	5.50	7.00
891229	150.50	154.50	900104	154.50	160.50	4.00	6.00
900105	150.50	146.25	900111	148.88	151.75	-1.63	5.50

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
900112	149.25	149.25	900118	149.25	154.75	0.00	5.50
900119	142.00	143.00	900125	142.00	148.50	0.00	5.50
900126	139.75	139.75	900201	139.75	145.25	0.00	5.50
900202	120.00	125.25	900208	120.50	128.75	0.50	3.50
900209	120.00	126.75	900215	121.00	130.75	1.00	4.00
900216	120.00	126.75	900222	121.00	130.25	1.00	3.50
900223	120.00	126.50	900301	121.00	130.25	1.00	3.75
900302	120.50	126.75	900308	121.50	130.75	1.00	4.00
900309	120.50	126.75	900315	121.50	130.75	1.00	4.00
900316	120.50	126.75	900322	122.50	130.75	2.00	4.00
900323	120.50	126.75	900329	123.00	130.75	2.50	4.00
900330	121.50	127.75	900405	122.50	132.00	1.00	4.25
900406	131.75	137.00	900411	137.25	143.00	5.50	6.00
900412	131.75	137.00	900419	137.25	143.00	5.50	6.00
900420	131.75	137.00	900426	137.75	143.50	6.00	6.50
900427	131.75	137.00	900503	137.75	143.50	6.00	6.50
900504	133.25	137.75	900510	138.75	143.50	5.50	5.75
900511	134.75	139.50	900517	140.75	147.00	6.00	7.50
900518	135.75	140.50	900524	141.75	147.50	6.00	7.00
900525	135.75	140.50	900600	141.75	147.50	6.00	7.00
900601	136.25	141.00	900607	142.25	147.00	6.00	6.00
900608	140.00	144.50	900614	146.00	151.00	6.00	6.50
900615	140.50	144.50	900621	146.38	150.50	5.88	6.00
900622	140.50	144.50	900628	146.50	150.00	6.00	5.50
900629	140.50	144.50	900705	146.50	150.00	6.00	5.50
900706	141.50	145.50	900712	147.50	151.00	6.00	5.50
900713	141.50	145.50	900719	146.50	151.00	5.00	5.50
900720	142.00	145.75	900726	147.00	151.25	5.00	5.50
900727	142.50	146.75	900802	147.50	152.25	5.00	5.50
900803	142.50	146.50	900809	146.50	152.00	4.00	5.50
900810	142.25	146.00	900816	146.25	151.50	4.00	5.50
900817	141.75	145.25	900823	144.13	149.25	2.38	4.00
900824	141.00	143.25	900830	142.88	147.25	1.88	4.00
900831	137.75	138.25	900906	138.25	142.25	0.50	4.00
900907	137.75	140.25	900913	138.25	144.25	0.50	4.00
900914	136.75	139.25	900920	137.75	142.75	1.00	3.50
900921	135.25	137.75	900927	133.75	141.25	-1.50	3.50
900928	132.25	132.75	901004	129.75	136.25	-2.50	3.50
901005	123.00	124.50	901011	122.50	126.00	-0.50	1.50
901012	114.25	114.25	901018	113.63	115.75	-0.63	1.50
901019	111.75	111.75	901025	110.25	113.25	-1.50	1.50
901026	107.00	109.00	901101	108.50	112.25	1.50	3.25
901102	105.25	108.75	901108	106.75	112.00	1.50	3.25

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
901109	105.25	108.75	901115	106.75	112.00	1.50	3.25
901116	105.25	108.75	901120	106.75	112.00	1.50	3.25
901121	105.25	108.75	901129	106.75	112.00	1.50	3.25
901130	105.25	108.75	901206	106.25	113.00	1.00	4.25
901207	105.25	108.75	901213	106.25	112.75	1.00	4.00
901214	105.25	108.75	901220	105.75	112.75	0.50	4.00
901221	105.25	108.75	901227	106.13	112.38	0.88	3.63
901228	105.25	109.00	910103	105.88	112.25	0.63	3.25
910104	105.25	108.50	910110	105.88	111.00	0.63	2.50
910111	105.25	108.75	910117	105.88	111.25	0.63	2.50
910118	105.25	108.75	910124	105.88	111.25	0.63	2.50
910125	105.25	108.75	910200	105.88	111.75	0.63	3.00
910201	105.25	108.75	910207	105.88	111.50	0.63	2.75
910208	105.25	108.75	910214	105.88	111.50	0.63	2.75
910215	105.25	108.75	910221	105.88	111.50	0.63	2.75
910222	105.25	108.75	910300	105.88	111.50	0.63	2.75
910301	105.25	108.75	910307	105.88	111.50	0.63	2.75
910308	105.25	108.75	910314	105.88	111.50	0.63	2.75
910315	105.25	108.75	910321	105.88	111.50	0.63	2.75
910322	105.25	108.75	910327	105.88	111.50	0.63	2.75
910328	105.25	108.75	910404	106.13	111.75	0.88	3.00
910405	105.25	108.75	910411	106.13	111.75	0.88	3.00
910412	105.25	108.75	910418	106.13	111.75	0.88	3.00
910419	105.25	108.75	910425	106.13	111.75	0.88	3.00
910426	105.25	108.75	910502	106.13	111.75	0.88	3.00
910503	106.50	108.75	910509	108.50	112.38	2.00	3.63
910510	107.50	109.75	910516	109.00	112.88	1.50	3.13
910517	112.00	114.75	910523	114.00	118.75	2.00	4.00
910524	112.00	114.75	910530	114.00	118.75	2.00	4.00
910531	113.25	115.50	910606	116.50	119.50	3.25	4.00
910607	114.25	116.75	910613	117.75	120.75	3.50	4.00
910614	115.00	117.50	910620	118.00	121.50	3.00	4.00
910621	117.75	120.00	910627	120.25	124.00	2.50	4.00
910628	118.25	121.25	910704	121.25	125.25	3.00	4.00
910705	119.00	121.50	910711	122.00	125.50	3.00	4.00
910712	120.00	122.50	910718	123.25	126.50	3.25	4.00
910719	124.25	128.00	910725	127.50	132.50	3.25	4.50
910726	125.00	128.75	910801	128.50	133.75	3.50	5.00
910802	126.25	129.75	910808	129.50	134.75	3.25	5.00
910809	126.75	130.25	910815	130.00	135.75	3.25	5.50
910816	127.25	130.75	910822	130.50	136.25	3.25	5.50
910823	129.50	133.00	910829	132.75	138.50	3.25	5.50
910830	130.50	133.50	910905	133.75	139.00	3.25	5.50

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
910906	130.75	133.50	910912	136.25	139.00	5.50	5.50
910913	131.00	134.50	910919	134.25	140.00	3.25	5.50
910920	132.00	135.25	910926	135.50	140.50	3.50	5.25
910927	133.25	135.00	911003	136.25	140.25	3.00	5.25
911004	133.50	135.50	911010	136.50	140.75	3.00	5.25
911011	133.75	135.50	911017	136.75	140.75	3.00	5.25
911018	133.75	134.75	911024	136.75	139.75	3.00	5.00
911025	133.75	134.50	911100	136.75	139.25	3.00	4.75
911101	133.75	134.25	911107	136.50	139.00	2.75	4.75
911108	131.75	132.75	911114	133.75	136.75	2.00	4.00
911115	130.00	130.50	911121	131.00	134.00	1.00	3.50
911122	128.25	128.75	911128	129.25	132.25	1.00	3.50
911129	127.75	128.25	911205	128.75	131.75	1.00	3.50
911206	124.25	127.25	911212	124.75	130.75	0.50	3.50
911213	123.75	127.25	911219	124.75	130.25	1.00	3.00
911220	122.25	125.75	911226	123.25	128.75	1.00	3.00
911227	121.25	124.75	920102	122.25	127.75	1.00	3.00
920103	121.25	124.75	920109	120.25	127.75	-1.00	3.00
920110	118.25	124.75	920116	118.12	127.25	-0.13	2.50
920117	115.00	121.50	920123	115.00	124.50	0.00	3.00
920124	115.00	119.00	920130	114.75	120.75	-0.25	1.75
920131	115.00	119.00	920206	114.50	120.75	-0.50	1.75
920207	113.50	119.00	920213	113.00	120.50	-0.50	1.50
920214	113.75	115.50	920220	113.25	117.25	-0.50	1.75
920221	113.75	115.25	920227	113.25	117.00	-0.50	1.75
920228	113.75	115.25	920305	114.25	118.25	0.50	3.00
920306	113.75	115.25	920312	113.88	119.25	0.13	4.00
920313	113.75	115.75	920319	114.75	119.75	1.00	4.00
920320	114.25	116.25	920326	116.00	120.75	1.75	4.50
920327	114.25	118.25	920402	115.75	122.75	1.50	4.50
920403	118.25	123.50	920409	120.75	128.50	2.50	5.00
920410	123.75	126.75	920415	126.25	132.25	2.50	5.50
920416	127.50	130.25	920423	130.25	135.75	2.75	5.50
920424	129.50	131.25	920500	133.50	137.75	4.00	6.50
920501	130.50	132.50	920507	135.00	139.00	4.50	6.50
920508	131.50	133.50	920514	135.75	140.00	4.25	6.50
920515	132.25	134.25	920521	136.25	140.25	4.00	6.00
920522	133.00	135.00	920528	137.00	141.00	4.00	6.00
920529	133.50	135.50	920604	137.50	141.50	4.00	6.00
920605	133.50	135.50	920611	137.50	141.00	4.00	5.50
920612	133.75	135.75	920618	137.75	141.25	4.00	5.50
920619	134.00	136.25	920625	137.00	141.25	3.00	5.00
920626	134.25	137.00	920701	137.25	142.00	3.00	5.00

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/ Price 1/	Average WAP Block Price 1 Price 1	WAP Barrel Premium 2/ Premium 2/	WAP Block Premium 2/ Premium 2/
-----cents per pound-----							
920702	134.25	137.00	920709	135.75	142.00	1.50	5.00
920710	134.25	137.00	920716	135.75	142.00	1.50	5.00
920717	134.25	137.00	920723	135.75	142.00	1.50	5.00
920724	134.25	137.00	920730	133.25	141.00	-1.00	4.00
920731	135.00	138.75	920806	136.50	142.75	1.50	4.00
920807	135.00	138.75	920813	136.50	142.75	1.50	4.00
920814	133.50	138.75	920820	135.00	142.75	1.50	4.00
920821	131.00	136.50	920827	129.00	140.00	-2.00	3.50
920828	131.00	136.50	920903	129.00	140.00	-2.00	3.50
920904	129.25	136.50	920910	128.25	139.00	-1.00	2.50
920911	129.25	136.25	920917	127.75	138.25	-1.50	2.00
920918	124.50	131.50	920924	123.50	133.50	-1.00	2.00
920925	124.50	131.50	921001	123.50	133.50	-1.00	2.00
921002	123.50	130.50	921008	123.00	132.50	-0.50	2.00
921009	123.25	130.50	921015	123.25	133.00	0.00	2.50
921016	123.25	130.75	921022	123.25	133.25	0.00	2.50
921023	121.75	128.25	921029	121.25	130.75	-0.50	2.50
921030	121.75	127.50	921105	121.25	130.50	-0.50	3.00
921106	121.75	127.25	921112	121.25	130.25	-0.50	3.00
921113	121.50	126.50	921119	121.00	129.50	-0.50	3.00
921120	120.50	124.75	921124	120.00	127.50	-0.50	2.75
921125	120.00	124.25	921203	119.50	127.50	-0.50	3.25
921204	117.00	120.00	921210	116.50	123.13	-0.50	3.13
921211	117.00	120.00	921217	116.50	122.00	-0.50	2.00
921218	117.00	120.00	921222	116.50	122.00	-0.50	2.00
921223	117.00	120.00	921229	116.50	121.75	-0.50	1.75
921230	117.00	120.00	930107	116.50	121.75	-0.50	1.75
930108	114.00	119.00	930114	114.00	120.25	0.00	1.25
930115	112.00	116.00	930121	112.00	117.50	0.00	1.50
930122	112.00	116.00	930128	112.25	117.25	0.25	1.25
930129	112.00	116.00	930204	112.00	117.75	0.00	1.75
930205	112.00	116.00	930211	112.25	118.25	0.25	2.25
930212	112.00	116.00	930218	112.25	118.75	0.25	2.75
930219	112.00	116.00	930225	113.00	119.50	1.00	3.50
930226	112.50	116.00	930304	114.50	120.25	2.00	4.25
930305	113.50	117.25	930311	115.50	121.50	2.00	4.25
930312	116.00	119.00	930318	118.00	123.38	2.00	4.38
930319	119.75	122.50	930325	122.75	127.25	3.00	4.75
930326	125.00	127.00	930401	128.00	132.00	3.00	5.00
930402	130.00	131.00	930407	133.00	136.00	3.00	5.00
930408	135.00	138.00	930415	138.00	143.00	3.00	5.00
930416	136.50	139.25	930422	138.50	144.25	2.00	5.00
930423	136.50	139.25	930429	138.50	143.50	2.00	4.25

NCE Date	NCE Barrel Price	NCE Block Price	WAP Date	Average WAP Barrel Price 1/	Average WAP Block Price 1	WAP Barrel Premium 2/	WAP Block Premium 2/
----cents per pound----							
930430	136.50	139.25	930506	138.50	142.75	2.00	3.50
930507	136.50	139.25	930513	138.38	142.75	1.88	3.50
930514	136.50	139.25	930520	138.38	140.75	1.88	1.50
930521	136.25	139.25	930527	136.25	140.75	0.00	1.50
930528	136.25	139.25	930603	136.25	140.75	0.00	1.50
930604	132.25	136.75	930610	136.25	140.75	4.00	4.00
930611	128.75	133.50	930617	128.75	133.50	0.00	0.00
930618	122.00	126.00	930624	122.75	127.50	0.75	1.50
930625	122.00	125.75	930700	123.00	127.25	1.00	1.50
930701	122.00	125.75	930708	123.25	127.50	1.25	1.75
930709	122.00	125.50	930715	122.75	127.50	0.75	2.00
930716	120.25	123.75	930722	121.25	125.75	1.00	2.00
930723	118.75	122.25	930729	119.50	124.25	0.75	2.00
930730	117.75	122.00	930805	119.25	124.50	1.50	2.50
930806	116.75	122.00	930812	118.25	124.50	1.50	2.50
930813	115.00	121.00	930819	116.50	123.50	1.50	2.50
930820	115.00	121.00	930826	116.50	124.50	1.50	3.50
930827	115.00	126.25	930902	117.25	130.25	2.25	4.00
930903	128.00	134.50	930909	130.50	138.75	2.50	4.25
930910	131.50	134.50	930916	133.75	138.50	2.25	4.00
930917	131.50	134.50	930923	134.25	138.50	2.75	4.00
930924	131.50	134.50	931000	134.25	138.50	2.75	4.00
931001	131.50	134.50	931007	134.00	138.75	2.50	4.25
931008	131.50	134.50	931014	133.50	139.00	2.00	4.50
931015	131.50	134.50	931021	133.50	139.13	2.00	4.63
931022	131.50	134.50	931028	133.50	139.00	2.00	4.50
931029	131.50	134.50	931104	133.50	139.00	2.00	4.50
931105	131.50	134.50	931111	133.38	138.63	1.88	4.13
931112	130.75	134.50	931118	131.75	138.50	1.00	4.00
931119	130.75	134.75	931123	131.75	138.75	1.00	4.00
931124	130.75	134.75	931202	131.75	138.75	1.00	4.00
931203	129.75	133.50	931209	130.25	134.50	0.50	1.00
931210	128.25	132.00	931216	128.75	133.50	0.50	1.50
931217	126.25	130.00	931222	126.75	131.50	0.50	1.50
931223	126.25	130.00	931230	126.75	131.50	0.50	1.50
931230	126.25	130.00	940106	126.75	131.38	0.50	1.38

Source: Dairy Market News, AMS, USDA.

1/ USDA reports a minimum and maximum WAP price each week. The WAP price reported here is the simple average of the minimum and maximum price reported by USDA.

2/ WAP Premiums are measured as the difference between the average WAP price as reported on Thursday of each week and the NCE Price as reported on Friday of the previous week.

Chapter 5--Trader Activity-Price Relationships

A. Introduction

During 1988-1993 there was a cyclical pattern to cheese prices each year caused by seasonal variation in overall supply and demand conditions. Prices typically were lowest at the beginning of the flush production months--February-March--rising thereafter until they peaked in late summer or fall. There were departures from the general pattern in some years due to unique supply and demand factors.

Overall supply and demand conditions determine the broad contour of prices over each price cycle. But given the high price inelasticity of short-run supply, there often is a range of prices that will clear the market at each point on the cycle, which gives traders with market power a range within which they may influence the price established each week on the NCE.

In the preceding chapters we demonstrated that leading traders often have a financial interest in the level of NCE prices; this interest provides a motive for traders to use the NCE to influence prices, not merely to buy or sell cheese. Based on an examination of their business characteristics, we hypothesized the following motives for trader activity on the NCE: Because Kraft, Borden and Alpine Lace may at times benefit from lower NCE prices, they are predominantly seller-traders on the NCE despite the fact that they buy virtually all their bulk cheese requirements (not made in their own plants) directly from cheese manufacturers. Because Beatrice, Schreiber, Mid-Am, Land O' Lakes and AMPI may at times benefit from higher NCE prices, they are primarily buyer-traders on the NCE. We cannot hypothesize the motives of another leading trader, Dairystate, since its status as a broker makes its trading activity dependent on the nature and motives of its clients.

In this chapter we examine the above traders' conduct on the NCE to determine whether it is consistent with their hypothesized conduct. We begin with an overview of trader activity during 1988-1993 and then examine the relationship between the activity of individual leading traders and NCE prices. We examine the 1988-1993 period because, as discussed in Chapter 4, a significant change in the trading conduct of several leading traders occurred between 1980-1987 and 1988-1993. Several concerns that had been primarily seller-traders on the NCE became primarily buyer-traders, and vice versa. The transition in trading roles took place within the span of a couple of years, beginning with Kraft's switch in August 1986. Whereas Kraft bought more than it sold on the NCE during 1980 through July 1986, beginning in August 1986 it became exclusively a seller-trader and continued thus through 1993. Leading agricultural cooperative cheese manufacturers began the transition from seller-traders to buyer-traders a little later, in 1988. Since the changes in roles had taken place by 1988 or soon thereafter, we shall limit our analysis of trading activity to the period 1988-1993. For a brief discussion of Kraft's trading activity during 1986 and 1987, see Appendix 5.A. Finally, we make an econometric analysis of the relationship between trader activity and the level of NCE prices.

B. Overview of Trader Activities

Table 5-1 summarizes total seller and buyer trading activity of nine leading traders for the period 1988-1993. The upper half of the table contains three classifications of seller activity: (a) offers or reduced offers to sell; (b) actual sale from having an offer "covered"; and (c) actual sale by filling a bid. Total sales for each trader are the sum of its offers that are covered and bids that it fills. The buyer counterparts to seller activity are summarized on the bottom half of the table: (a) bids or increased bids to buy; (b) actual purchase by having a bid filled; and (c)

Table 5.1. Types of Trading Activity by Leading Traders of Barrel and Block Cheese on the NCE, 1988-1993

Type of Trader Activity	Leading Traders										TOTAL
	Kraft	Borden	Alpine	DS ¹	Beatrice	Mid-Am	Schreiber	LOL	AMPI	All Others ²	
Seller Activity of Traders											
Offers and Reduced Offers											
Number	879	250	485	501	0	0	26	59	3	389	2592
%	34	10	19	19			1	2	*	15	100
Sale: Offer Covered											
Carloads	633	45	118	110	0	0	4	2	0	101	1013
%	62	4	12	11			*	*		10	100
Sale: Filled Bid											
Carloads	984	14	12	19	0	4	3	70	0	77	1183
%	83	1	1	2		*	*	6		7	100
TOTAL SALES											
Carloads	1617	59	130	129	0	4	7	72	0 ³	178	2196
%	74	3	6	6		*	*	3		8	100
Buyer Activity of Traders											
Bids and Increased Bids											
Number	3	29	15	160	968	573	357	220	196	650	3171
%	*	1	*	5	31	18	11	7	6	22	100
Purchase: Bid Filled											
Carloads	0	32	1	29	391	205	197	103	105	120	1183
%		3	*	2	33	17	17	9	9	10	100
Purchase: Covered Offer											
Carloads	22	0	2	0	382	286	125	86	67	43	1013
%	2		*		38	28	12	8	7	4	100
TOTAL PURCHASES											
Carloads	22	32	3	29	773	491	322	189	172	163	2196
%	1	1	*	1	35	22	15	9	8	7	100

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-93.

Note: Total percentage figure may not add, due to rounding.

*Less than 1 percent.

¹Dairystate Brands

²These are Alto (bought 6 carloads); Bongards' (sold 75 loads); Dairygold (sold 14 carloads); Edelweiss (bought 19 carloads); Empire Cheese (bought 5 carloads); Golden Cheese (sold 10 carloads); Hermke Cheese (bought 13 carloads); Marathon (sold 35 loads); Marketing Association (sold 6 carloads); Masters Gallery (sold 7 loads and bought 62); Northern (sold 18 loads, bought 33 loads); Northwood (sold 6 and bought 5 carloads); Schurman (sold 7 and bought 20 carloads). Green Bay Cheese, Fromageries, Frigo and Tolibia (made offers and bids but no sales or purchases).

³AMPI sold 10 loads through Dairystate, a broker. These loads are included in Dairystate's total sales.

actual purchase by covering an offer. Total purchases for each trader are the sum of its bids that are filled and offers that it covers.

We divide leading traders into two groups: seller-traders and buyer-traders. Three leading seller-traders, Kraft, Borden, and Alpine Lace, made 82 percent of all barrel and block sales on the NCE during 1988-1993. Kraft, alone, made 74 percent of all NCE sales and 83 percent of barrel sales, which accounted for 68 percent of all NCE sales. This large sales share made Kraft the dominant seller on the Exchange during this period. However, the other leading seller-traders, Borden and Alpine Lace, were significantly more active on the NCE than implied by their share of actual sales. Whereas they made only 9 percent of all NCE sales, they made 28 percent of all offers and reduced offers to sell, indicating that they were very often active in making offers during periods when few or no actual sales were made. They filled very few bids. Kraft was much more active in periods of heavy selling.

The leading buyer-trader, Beatrice, made 35 percent of all purchases, which was less than one-half the sales share of the leading seller-trader, Kraft. However, buyer concentration was also high, with five buyers accounting for 89 percent of all purchases on the Exchange (Table 5.1).

Some companies were more important in barrel than in block sales. For example, although Kraft was the leading trader in both barrels and blocks, Borden traded only barrels, Beatrice traded more barrels than blocks, and Mid-Am traded more blocks than barrels (Appendix Tables 5.1a and 5.1b).

C. Trading Patterns of Various Traders

In this section we examine the NCE trading activity patterns over each price cycle during 1988-1993. We begin with Kraft, the leading trader on the NCE, and then examine the activity of other leading traders.

Trading Activity of Kraft

Figures 5.1a through 5.1c display Kraft's trading activity in barrels and blocks on the NCE from July 1988 through June 1993. The solid bars show the NCE opinion or settlement price for barrels¹ at the end of a day's trading, and the space between bars identifies the extent of trading activity during the day. The "K" notation below the price line identifies each time Kraft acted on the NCE. The notations above the price line identify the types of activity involved as follows:

- F, Kraft *filled* another trader's bid to buy
- O, Kraft *offered* to sell
- R, Kraft *reduced* the price of its previous offer
- C, another trader *covered* a Kraft offer to sell
- B, Kraft *bid* to buy
- I, Kraft *increased* its previous bid.

The numbers below the line indicate the number of loads Kraft sold. Below the bottom axis of each figure is shown the trading date with year, month, and day; e.g., 88.0701 is July 1, 1988.

Not all trading dates are reported because of space limitations.

Kraft trading activity during July 1988 through June 1993 followed the same general pattern over each price cycle. Around price peaks, Kraft usually initially filled bids, then offered to sell, and then reduced its offers. Once prices began to fall, Kraft usually continued making

¹ To simplify the presentation, no price line is shown for blocks, which generally move in unison with barrels at a few cents above barrels.

Figure 5.1a: Kraft Activity on NCE

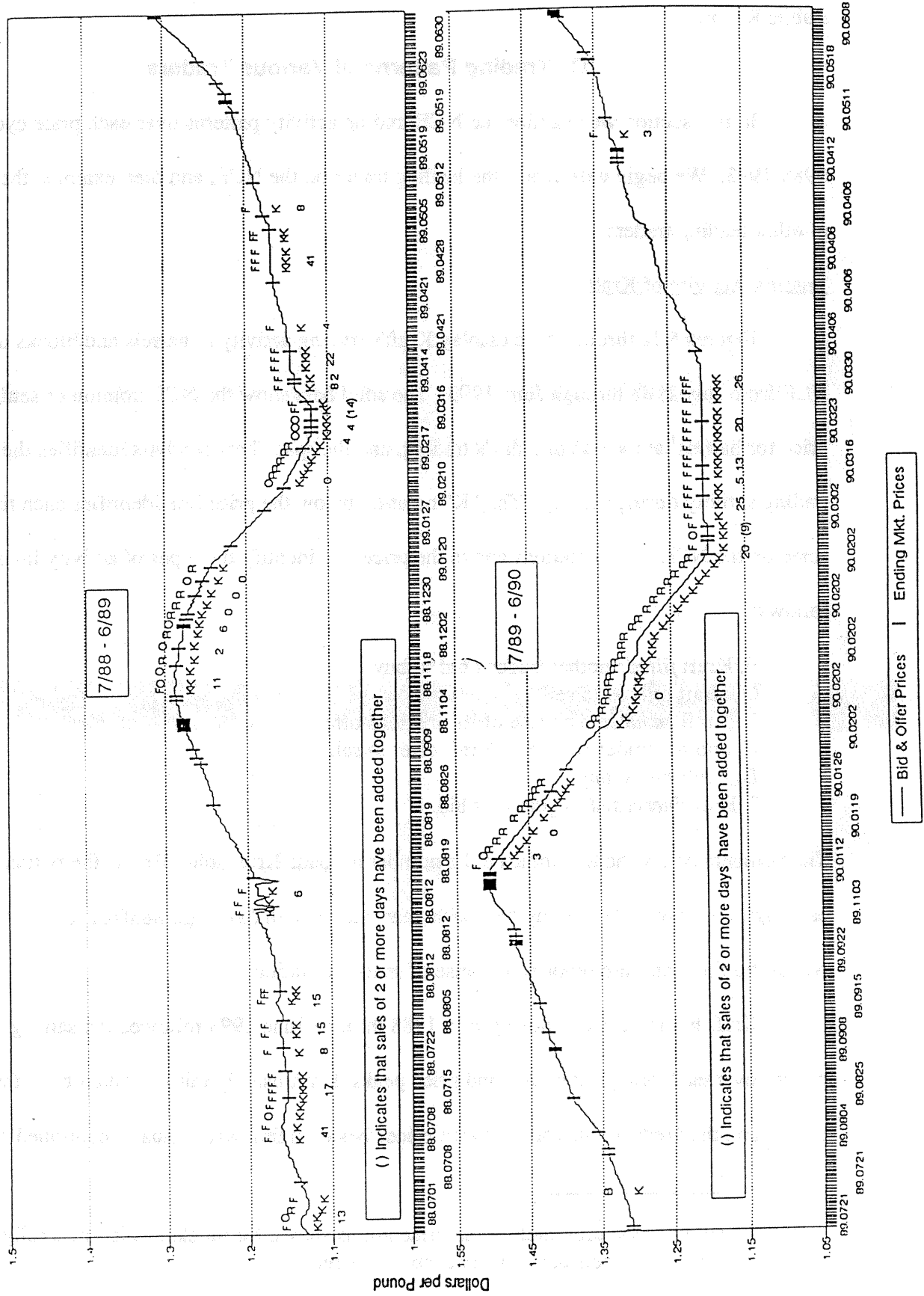
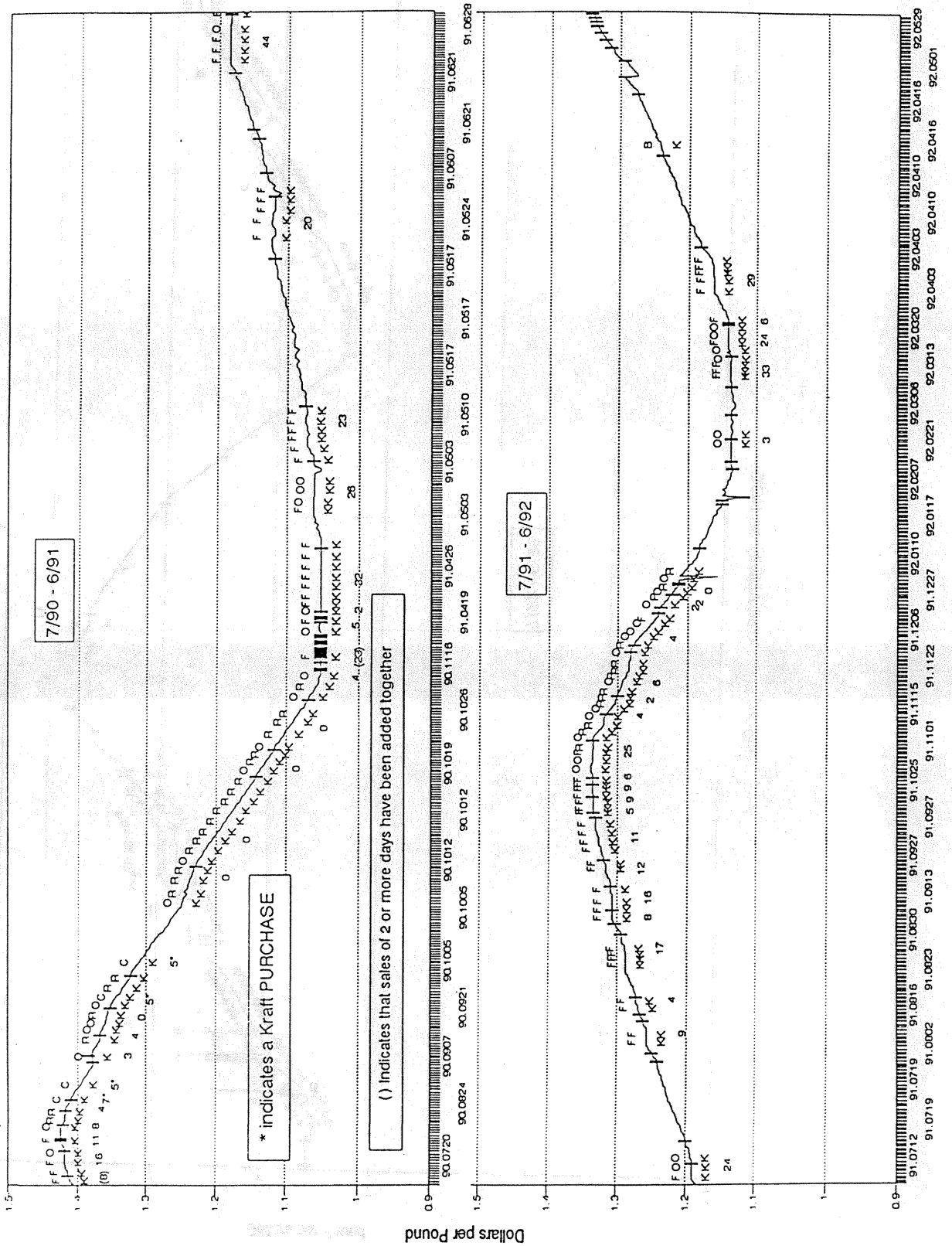


Figure 5.1b: Kraft Activity on NCE



— Bid & Offer Prices | Ending Mkt. Prices

offers, although it sometimes ceased doing so as other seller-traders maintained the trend. Often prices declined with few or no actual transactions during most sessions; but if Kraft's offers were covered, it continued making offers until prices resumed their decline. At the price bottom Kraft filled bids or made offers, often selling quite heavily. In the subsequent price upturn, Kraft remained relatively inactive, except for periodic selling, which seemed to have the purpose and effect of moderating the momentum of the rising price trend (see Section E this chapter).

There are a few seemingly notable exceptions to Kraft's activity as a *seller-trader*, when Kraft *appeared* to behave as a *buyer-trader* during several trading sessions. During two of these sessions, July 21, 1989 and April 16, 1992, Kraft made a single bid to buy on the Exchange. Neither bid was filled.² In addition, during four sessions in August-October 1990, Kraft bought 22 loads of blocks on the Exchange. These exceptions do not represent *bona fide* buyer-trader activity, as explained in Section E of this chapter, and in all other trading sessions during 1988-1993, Kraft acted as a seller-trader. Thus we frequently refer to Kraft as an *exclusive seller-trader*.

Trading Patterns of Other Leading Traders

The barrel trading activity of Kraft and other leading traders is displayed in Appendix Figures 5-1a to 5-1e, with each graph showing one year's activity. The bold line traces changes in price, while the solid bars on the bold price line depict the opinion or settlement price at the end of a trading day. Wider bars indicate that no trading activity occurred for two or more

² We have omitted several actions in this graph where a trader made an opening bid far below the closing opinion of the prior session. These bids were ignored by other traders because the accepted procedure is for the opening bid or offer to be at the prior week's close. We have included one such opening bid made April 21, 1992, because the bid was filled. This was considered an improper action. See Chapter 4, text at note 112.

consecutive trading days. The shadow lines above and below the bold price line are included to show the activity of individual leading traders. The leading seller-traders appear above the bold line and the leading buyer-traders below the bold line. The nature of each activity is identified using the following letter codes:

- F: fill another trader's bid to buy
- O: offer to sell
- R: reduce price of previous offer
- C: cover another trader's offer
- B: bid to buy
- I: increase price of previous bid

Seller-Trader Activity in Barrels--Beginning in 1990, Borden and Alpine Lace frequently joined Kraft in selling activity on the NCE, with Borden selling only barrels and Alpine Lace mainly blocks.³ However, their activity differed from Kraft's in an important respect. Although these traders and Kraft were often active during the same periods, Kraft usually took the lead. And when buyer-traders began buying heavily, Borden and Alpine Lace typically became inactive, leaving the heavy selling to Kraft. As a consequence, Kraft made far more actual sales than either Borden or Alpine Lace, who made 26 percent of all offers and reduced offers for barrels, but only 5 percent of all sales. Kraft, on the other hand, made 48 percent of all offers and reduced offers to sell barrels, but 83 percent of all actual barrel sales during 1988-1993 (Appendix Table 5.1a).

³ Borden bought 28 loads during 1988 and none in 1989; during these years it sold only two loads. During 1990-1993, Borden was predominantly a seller-trader, buying only four loads, while selling 57 loads. During 1988 and 1989, Alpine Lace neither sold nor bought on the NCE; thereafter it became predominantly a seller-trader, selling 130 loads while buying only three loads. (Table 4.2).

Although Dairystate was an active barrel seller-trader at times,⁴ making 17 percent of all offers to sell, it made only 3 percent of all barrel sales. Also, Dairystate made more bids and increased bids to buy than did the other leading seller-traders: 114 (6 percent) versus 35 (2 percent) for Kraft, Borden and Alpine Lace combined. However, Dairystate made only 2 percent of all barrel purchases (Appendix Table 5.1a). It appears, therefore, that much of Dairystate's buying and selling activity was not made in expectation of consummated transactions. This activity suggests that Dairystate at times had an interest in influencing prices, whether acting for others or in its own behalf, not merely in buying or selling cheese on the Exchange.

Buyer-Trader Activity in Barrels--The leading buyer-traders in barrels were Beatrice, Mid-Am, Schreiber, Land O' Lakes and AMPI, some of whom did not trade actively in all years.

Combined, these traders purchased 89 percent of all barrels traded on the Exchange during 1988-1993. Each buyer-trader's total activity in barrels, as measured by its share of total bids, corresponded roughly with its share of total purchases (Appendix Table 5-1a). This pattern differed substantially from that of the seller-traders.

Typically, around price tops and price bottoms one or more buyer-traders made substantial purchases by accepting Kraft's offers to sell or by Kraft's filling of their bids to buy (Appendix Figures 5.1a to 5.1e). On the other hand, the leading buyer-traders initiated and maintained upward price trends, an action often accomplished with relatively few actual

⁴ We do not include Dairystate among the leading seller-traders because, as discussed above, we cannot hypothesize the motive for its trading conduct.

purchases, except when Kraft periodically filled bids with the apparent effect of moderating the price rise.

Trader Activity in Blocks--Kraft also was the leading seller-trader in blocks, accounting for 53 percent of all block sales in 1989-1993. Alpine Lace was the second largest at 17 percent, with Dairystate, a broker, taking third place at 13 percent. Borden, the second most active barrel trader, engaged in no block trading activity (Appendix Table 5.1b).

One difficulty with interpreting block trading patterns is that often such activity appears to be aimed at maintaining "appropriate" block-barrel price spreads. Indeed, even Kraft evidently bought 22 loads of blocks for this purpose in 1990.⁵ Often block prices merely followed barrel prices without actual transactions. This may also explain, in part, why far fewer blocks than barrels are traded on the NCE. For example, only 11 carloads of blocks were traded each year during 1988 and 1989, and in no year during 1988-1993 did block sales reach 200 loads (Appendix Table 4.2b). But whereas blocks account for just below one-third of all NCE sales, more blocks than barrels are sold in the spot market off the NCE, as well as under contract sales. Indeed, cheese processing plants, the destination of nearly all barrels, utilize only about one-fourth of all cheese manufactured. The other three-fourths is marketed predominantly as natural cheese and is cut and wrapped from 40- and 640-pound blocks.

Kraft began selling blocks during the historic price drop of February 2, 1990, and remained quite active thereafter, especially at price tops and bottoms, where Kraft filled bids and made offers that were covered. Kraft also was quite active during price declines, especially in the early stages after a market had topped (Appendix Figures 5.2a-5.2e).

⁵ See Section E, this chapter.

Alpine Lace and Dairystate combined made more offers to sell blocks than did Kraft, 51 percent versus 23 percent. But Kraft made more sales than they did, 53 percent versus 30 percent (Appendix Table 5.1b). Like the pattern we saw in barrel trading, when buyer-traders began covering many offers, Alpine Lace and Dairystate let Kraft carry the burden of selling, which it generally did at a loss.⁶ Leading buyer-traders were active at price bottoms and around price tops when Kraft was engaged in heavy selling. The buyers were especially active between price bottoms and price tops, when they often bid up prices with very few takers.

Thus, the pattern of block trading generally paralleled that in barrels, although the trading patterns were less clear than in barrels, perhaps because some block trading apparently occurred to maintain the proper block-barrel price spread.

D. Trader Activity-Price Relationships

Kraft Activity-Price Relationships

The relationships between trading activity and NCE prices, displayed graphically in the above figures, are summarized in the tables below. Table 5.2 summarizes the behavior of barrel prices on days in which Kraft was active on the Exchange during 1988-1993 and on days in which Kraft was not active but other traders (excluding Borden and Alpine Lace)⁷ were active. Kraft activity is divided among those days in which it (a) made sales; (b) made purchases; (c) made an offer to sell but the offer was not covered; and (d) made a bid to buy but the bid was not filled.

⁶ See Chapter 4, Table 4.3 and Chapter 6, Sections A-D.

⁷ The activity of Borden and Alpine Lace is excluded because they, like Kraft, were active seller-traders.

Of the 135 trading sessions in which Kraft was active as a seller-trader on the Exchange during 1988-1993, prices increased during only 5 percent,⁸ decreased 36 percent, and remained unchanged during 27 percent of the sessions. During the remaining 30 percent of the sessions, Kraft's selling activity appears to have had the effect of *moderating an upward price trend* (Table 5.2).⁹

During the 82 days that Kraft was not active in barrel trading on the Exchange but others were active (excluding Borden and Alpine Lace), barrel prices increased 63 percent of the days and decreased only 6 percent of the days. In the remaining 30 percent of the days, prices were unchanged. Few actual transactions occurred on days when other traders were active but Kraft, Borden and Alpine Lace were not. Trades occurred during only 10 of the 82 days that Kraft, Borden and Alpine Lace were inactive; these trades involved only 58 carloads (4 percent of total barrel sales during 1988-1993). In contrast, in the 135 days Kraft was active on the NCE it made sales during 104 (77 percent) of the days, involving sales of 1249 carloads (83 percent of all barrel sales during 1988-1993). These facts reflect that when Kraft was not active in selling

⁸ This excludes the two days Kraft apparently made bids designed to signal competitors that it approved an upward price trend. This activity is excluded because Kraft was not acting as a bona fide buyer-trader. See Section E, this chapter.

⁹ See Chapter 6, text at notes 55-58. Prices frequently increased some on these days.

Table 5.2. Price Behavior During Trading Days Kraft was Active and not Active on NCE, 1988-1993

	BARRELS						Total Loads Traded (6)
	Number of Trading Days:						
	Price Increased	Price Decreased	Price Remained Unchanged	Price Increase Stopped, Slowed or Reversed ^a	Total Days (5)		
	No. of Days (1)	No. of Days (2)	No. of Days (3)	No. of Days (4)			
1. Kraft Active on NCE							
Kraft made sale	7	24	33	40	104	1249	
Kraft made purchase	0	0	0	0	0	0	
Kraft offered, made no sales	0	24	4	1	29	0	
Kraft bid, made no purchases	2 ^b	0	0	0	2	0	
Total trading days	9	48	37	41	135	1249	
Percent of trading days	7 (5)% ^c	36%	27%	30%	100%		
2. Kraft Not Active but Others Active (excluding Borden and Alpine Lace)							
Trades took place	3	1	6	--	10	58	
No trades took place	49	4	19	--	72	0	
Total trading days	52	5	25	--	82	58	
Percent of trading days	63%	6%	30%	--	100%		
3. No Activity on NCE							
TOTAL DAYS OF TRADING					62	279	

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-1993.

^aThis refers to a day in which prices were increasing as a result of other trader activity until Kraft began selling activity, at which time the upward price trend was stopped, reversed, or slowed appreciably.

^bThese bids were apparently designed to signal competitors that Kraft agreed that prices should continue to increase. See Section E, this chapter.

^cExcluding two weeks in which Kraft made bids for signaling purposes only. See note b above.

Table 5.3. Price Behavior During Trading Days Kraft was Active and not Active on NCE, 1988-1993

BLOCKS

Number of Trading Days:

	Number of Trading Days:						Total Loads Traded (6)
	Price Increased No. of Days (1)	Price Decreased No. of Days (2)	Price Remained Unchanged No. of Days (3)	Price Increase Stopped, Slowed or Reversed ^a No. of Days (4)	Total Days (5)		
1. Kraft Active on NCE							
Kraft made sale	7	23	23	22	75	368	
Kraft made purchase	0	4 ^b	0	0	4	22 ^b	
Kraft offered, made no sales	0	15	1	0	16	0	
Kraft bid, made no purchases	1 ^c	0	0	0	1	0	
Total trading days	8	42	24	22	96	390	
Percent of trading days	8 (7) ^d	44%	25%	23%	100%		
2. Kraft Not Active but Others Active (excluding Borden and Alpine Lace)							
Trades took place	5	3	6	--	14	60	
No trades took place	57	7	28	--	92	0	
Total trading days	62	10	34	--	106	60	
Percent of trading days	58%	9%	32%	--	100%		
3. No Activity on NCE							
					90		
TOTAL DAYS OF TRADING					292		

Source: National Cheese Exchange, Trading Activity Minutes, AMS, USDA, 1988-1993.

^aThis refers to a day in which prices were increasing as a result of other trader activity until Kraft began selling activity, at which time the upward price trend was stopped, reversed, or slowed appreciably.

^bThese purchases appear to have been made to align block prices with barrel prices, not to buy blocks since at the time Kraft was leading NCE prices down. See Section E, Chapter 5.

^cThis bid evidently was made to signal competitors that Kraft believed prices should continue to rise. See Section E, this chapter.

^dExcluding week in which Kraft made a bid for signaling purposes only. See note c above.

barrels, other traders' activity involved primarily bids and increased bids or offers and reduced offers, with very few consummated sales. During another 62 days no trader activity occurred.

The overall pattern of block trading activity parallels that of barrel trading (Table 5.3). Indeed, during the days Kraft was active in blocks, prices decreased somewhat more frequently (44 percent) than in barrels (36 percent).

Activity-Price Relationships of Leading Seller- and Buyer-Traders

As hypothesized above, leading traders may be divided into two groups: *seller-traders* and *buyer-traders*. We therefore examine the relationship between NCE prices and the trading activity of leading seller-traders and buyer-traders during 1988-1993. The leading seller-trader group consists of Kraft, Borden and Alpine Lace;¹⁰ and the leading buyer-trader group consists of Beatrice, Mid-Am, Schreiber, Land O' Lakes and AMPI. Table 5.4 shows the behavior of NCE prices on days when these leading seller-traders and buyer-traders were active on the NCE during 1988-1993.

There is a distinct difference in the activity-price relationships of the two groups. During the days the leading seller-traders were active on the Exchange, prices increased 8 percent of the time, decreased 43 percent of the time, and remained unchanged 22 percent of the time. During the remaining 27 percent of the days seller-trader activity had the apparent effect of moderating an upward price trend.¹¹ In contrast, during the days buyer-traders were active, prices increased 45 percent of the time, decreased 30 percent of the time, and remained

¹⁰ Dairystate, a broker, is not included among the leading seller-traders because, unlike the other leading seller-traders, we cannot infer a motive for its conduct on the NCE. See third paragraph of this Chapter and Chapter 4, Section C.

¹¹ Prices often increased some during these trading sessions.

unchanged 25 percent of the time.¹² Thus, the activity of the seller group is negatively related to price changes, which is hardly surprising since it is dominated by Kraft's activity as displayed in Tables 5.2 and 5.3. On the other hand, the activity of the buyer group is somewhat more often related to price increases than to price decreases (Table 5.4).

Leading buyer-traders were active during more days of trading than were the leading seller-traders: 239 versus 183. During 164 of the total 313 trading days, members of both groups were active, and during 55 days members of neither group were active. Thus, buyer-traders were inactive for only 19 of the days in which seller-traders were active, whereas seller-traders were inactive for 75 of the days in which buyer-traders were active. This difference reflects the fact that while both seller-traders and buyer-traders were active during price bottoms and price tops, seller-traders remained relatively inactive when buyer-traders were bidding up prices. (Appendix Table 5.2 shows the activity patterns of the seller- and buyer-trader groups separately for barrels and blocks.)

The activity-price relationships of individual leading seller- and buyer-traders are shown in Appendix Tables 5.3 and 5.4. The seller-trader group sold 1806 loads and bought 57 loads. The 22 loads Kraft bought were apparently for the purpose of influencing the price spread between blocks and barrels, not to obtain needed cheese.¹³ Alpine Lace bought only three loads during 1988-1993. Borden bought all but four of its 32 loads during 1988 (Table 4.2).

¹² The comparisons are influenced by the addition of a separate category for seller-traders: days when their activity appeared to have had the effect of stopping, slowing or reversing an upward price trend. This activity also has a negative impact on price changes although occurring during an upward trend in prices. There is no clear counterpart of this category for buyer-traders. However, at times buyer activity appeared to slow price declines.

¹³ See Section E, this chapter.